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CLAIMS SEQUENCE LISTING

We claim:

1. A method of screening drug candidates comprising:

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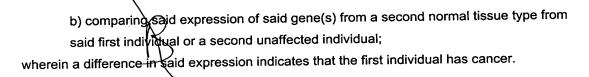
- a) providing a cell that expresses an expression profile gene encoding CHA4 or fragment thereof;
- b) adding a drug candidate to said cell; and
- c) determining the effect of said drug candidate on the expression of said expression profile gene.
- 2. A method according to claim 1 wherein said determining comprises comparing the level of expression in the absence of said drug candidate to the level of expression in the presence of said drug candidate.
- 3. A method of screening for a bioactive agent capable of binding to CHA4 or a fragment thereof, said method comprising:
 - a) combining said CHA4 or a fragment thereof and a candidate bioactive agent; and
 - b) determining the binding of said candidate agent to said CHA4 or a fragment thereof.
- 4. A method for screening for a bioactive agent capable of modulating the activity of CHA4, said method comprising:
 - a) combining CHA4 and a candidate bioactive agent; and
 - b) determining the effect of said candidate agent on the bioactivity of CHA4.
- 5. A method of evaluating the effect of a candidate cancer drug comprising:
 - a) administering said drug to a patient;
 - b) removing a cell sample from said patient; and
 - c) determining the expression of a gene encoding CHA4 or fragment thereof.
- 6. A method according to claim 5 further comprising comparing said expression profile to an expression profile of a healthy individual.
 - 7. A method of diagnosing cancer comprising:
 - a) determining the expression of a gene CHA4 or a fragment thereof in a first tissue type of a first individual; and

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- 8. An antibody which specifically binds to CHA4 or a fragment thereof.
- The antibody of Claim 8, wherein said antibody is a monoclonal antibody.
 - 10. The antibody of Claim 8, wherein said antibody is a humanized antibody.
 - 11. The antibody of Claim 8, wherein said antibody is an antibody fragment.
 - 12. The antibody of Claim 8, wherein said antibody modulates the bioactivity of CHA4.
 - 13. The antibody of Claim 12, wherein said antibody is capable of inhibiting the bioactivity or neutralizing the effect of CHA4.
 - 14. A method for screening for a bioactive agent capable of interfering with the binding of CHA4 or a fragment thereof and an antibody which binds to CHA4 or fragment thereof, said method comprising:
 - a) combining CHA4 or fragment thereof, a candidate bioactive agent and an antibody which binds to CHA4 or fragment thereof; and
 - b) determining the binding of CHA4 or fragment thereof and said antibody.
 - 15. A method according to Claim 14, wherein said antibody is capable of inhibiting or neutralizing the bioactivity of CHA4.
 - 16. A method for inhibiting the activity of CHA4, said method comprising binding an inhibitor to CHA4.
 - 17. A method according to claim 16 wherein said inhibitor is an antibody.
 - 18. A method of neutralizing the effect of CHA4 or a fragment thereof, comprising contacting an agent specific for said CHA4 or fragment thereof with said CHA4 or fragment thereof in an amount sufficient to effect neutralization.

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- 19. A method of treating breast cancer and/or colorectal cancer comprising administering to a patient an inhibitor of CHA4.
- 20. A method according to claim 19 wherein said inhibitor is an antibody.
- 21. A method for localizing a therapeutic moiety to breast cancer and/or colorectal cancer tissue comprising exposing said tissue to an antibody to CHA4 or fragment thereof conjugated to said therapeutic moiety.
 - 22. The method of Claim 21, wherein said therapeutic moiety is a cytotoxic agent.
 - 23. The method of Claim 21, wherein said therapeutic moiety is a radioisotope.
 - 24. A method of treating breast cancer or colorectal cancer comprising administering to an individual having said cancer an antibody to CHA4 or fragment thereof conjugated to a therapeutic moiety.
 - 25. The method of Claim 24, wherein said therapeutic moiety is a cytotoxic agent.
 - 26 The method of Claim 24, wherein said therapeutic moiety is a radioisotope.
- 27. A method for inhibiting breast cancer or colorectal cancer in a cell, wherein said method comprises administering to a cell a composition comprising antisense molecules to a nucleic acid of figure 1.
 - 28. A biochip comprising one or more nucleic acid segments encoding CHA4 or a fragment thereof, wherein said biochip comprises fewer than 1000 nucleic acid probes.
- 29. A method of eliciting an immune response in an individual, said method comprising
 administering to said individual a composition comprising CHA4 or a fragment thereof.
 - 30. A method of eliciting an immune response in an individual, said method comprising administering to said individual a composition comprising a nucleic acid encoding CHA4 or a fragment thereof.

31. A method for determining the prognosis of an individual with breast cancer or colorectal cancer comprising determining the level of CHA4 in a sample, wherein a high level of CHA4 indicates a poor prognosis.

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